

Listing of Claims:

1. (Currently Amended) A medical appliance for placement within a portion of the anatomy of a patient, the appliance comprising:

a scaffolding, the scaffolding configured to define a substantially cylindrical member having a distal end and a proximal end and extending longitudinally there between, forming a lumen there through, along the longitudinal extension of the appliance the scaffolding having an interior and an exterior surface comprising struts with geometrical patterns formed by angles, wherein the angles determine the relative flexibility of the medical appliance such that the appliance conforms to the topography of a target lumen and when pressure is exerted along varying points of the longitudinal extension of the appliance, the appliance does not foreshorten or elongate, wherein the struts comprise an interior and an exterior surface; and

a compliant cover, comprising an interior surface and an exterior surface, the exterior surface of the cover adhered ~~coupled with the scaffolding~~ to the interior surfaces of a plurality of the struts, such that the interior surfaces of the plurality of struts and the area between the plurality of struts are covered ~~such that the cover conforms to the interior surface of the scaffolding and at least a portion of the struts between the interior and exterior surfaces of the scaffolding.~~

2. (Currently Amended) The medical appliance of claim 2, wherein the cover is ~~coupled with the scaffolding~~ adheres to the interior surfaces of the struts such that both the interior surfaces of the struts and the area between the struts are covered, the cover ~~[[of]]~~ having sufficient thickness to prevent galvanic current.

3. (Previously Presented) The medical appliance of claim 2, wherein a portion of the medical appliance is covered with a polymeric material.
4. (Previously Presented) The medical appliance of claim 1, wherein only the ends of the medical appliance are covered.
5. (Cancelled)
6. (Currently Amended) The medical appliance of claim [[5]] 1, wherein the cover is substantially hydrophobic.
7. (Currently Amended) The medical appliance of claim [[5]] 1, wherein the cover is substantially hydrophilic.
8. (Previously Presented) The medical appliance of claim 6, wherein the cover is hydroscopic.
9. (Previously Presented) The medical appliance of claim 7, wherein the cover is substantially hydroscopic.
10. (Original) The medical appliance of claim 1, wherein at least one strut defines an aperture there through.
11. (Original) The medical appliance of claim 10, wherein the at least one aperture defines an eyelet of sufficient diameter to receive suture.

12. (Original) The medical appliance of claim 11, wherein the eyelet diameter is at least 300 μm .

13. (Currently Amended) The medical appliance of claim [[5]] 1, wherein the cover does not inhibit flexing or radial expansion of the medical appliance.

14. (Currently Amended) The medical appliance of claim [[5]] 1, wherein the cover adheres completely to contours of the stent struts such that angles are formed between the cover and the struts for fluid retention.

15. (Canceled).

16. (Original) The medical appliance of claim 1, wherein the dimensions of the scaffolding geometry determine torsionality of the medical appliance.

17. (Original) The medical appliance of claim 1, wherein the scaffolding is formed of a memory capable alloy.

18. (Original) The medical appliance of claim 17, wherein the scaffolding is electropolished.

19. (Currently Amended) The medical appliance of claim 1, wherein along the longitudinal expanse of the scaffolding the medical appliance further comprises a plurality of flanges that define apertures there through.

20. (Original) The medical appliance of claim 1, further comprising a connector coupled with portions of the geometrical patterns, the connector comprising a crossing member and a plurality of leg members extending from the crossing member.

21. (Original) The medical appliance of claim 20, wherein the connector further comprises a rectangular detent extending from a leg thereof.

22. (Previously Presented) The medical appliance of claim 20, wherein the length of the leg members and the degree of the angle at which the legs extend from the crossing member determines the flexibility of the medical appliance.

23. (Original) The medical appliance of claim 21, wherein the angle at which the leg members extend from the crossing member is greater than 90°.

24. (Previously Presented) The medical appliance of claim 23, wherein the medical appliance is rigid.

25. (Original) The medical appliance of claim 23, wherein the angle at which the leg members extend from the crossing member is 90° or less.

26. (Previously Presented) The medical appliance of claim 24, wherein the medical appliance is flexible.

27. (Currently Amended) A method of covering a medical appliance, comprising the steps of:

providing a mold having an internal and an external diameter;

providing a medical appliance comprising a scaffolding, the scaffolding configured to define a substantially cylindrical member having a distal end and a proximal end and extending longitudinally there between, forming a lumen there through, along the longitudinal extension of the appliance the scaffolding having an interior and an exterior surface comprising struts with geometrical patterns formed by angles, wherein the angles determine the relative flexibility of the medical appliance such that the appliance conforms to the topography of a target lumen and when pressure is exerted along varying points of the longitudinal extension of the appliance, the appliance does not undesirably foreshorten or elongate, wherein the struts comprise an interior and an exterior surface;

inserting the medical appliance into the internal diameter of the mold;

applying a compliant cover to the interior surface of the medical appliance;

and

annealing the cover to the stent by applying heat to the cover such that the cover ~~conforms~~ adheres to the interior surfaces of a plurality of struts, such that the interior surfaces of the plurality of struts and the area between the plurality of struts are covered ~~the scaffolding and at least a portion of the struts between the interior and exterior surfaces of the scaffolding.~~

28. (Previously Presented) The method of claim 27, further comprising the step of applying a polymer to the exterior surface of the scaffolding.

29. (Previously Presented) The method of Claim 27, wherein annealing comprises annealing the cover to the stent using a compliant heating mechanism.

30. (Previously Presented) The method of Claim 27, further comprising positioning a collar around the external surface of the stent prior to annealing the cover to the stent, wherein the collar comprises ribs or wells for facilitating annealing of the cover between the interior and exterior surfaces of the scaffolding.

31. (Cancelled)

32. (Currently Amended) The medical appliance of Claim [[31]] 1, wherein the cover is non-compliant and the interior surface of the cover is smooth ~~and defines a smooth interior surface about the entire circumference of the scaffolding.~~

33. (Currently Amended) The medical appliance of Claim 1, wherein the cover is compliant and extends through the interstices of the scaffolding toward the outer surface of the scaffolding ~~configured to extend from the interior surface of the scaffolding toward the exterior surface such that the cover does not define a smooth interior surface about the entire circumference of the scaffolding.~~